

ABSTRACT OF THE DISCLOSURE

In a method of detecting arc discharge in a glow-discharge apparatus GD that has a high-frequency power source PS, a cutting pulse is output for time T1 to
5 the high-frequency power source PS to stop a supply of power to the glow-discharge apparatus GD, when $dV_r/dt - dV_f/dt$ increases over a first level, where V_f and V_r are a traveling-wave voltage and a reflected-wave voltage applied to the glow-discharge apparatus
10 GD, respectively. Arc discharge is determined to have developed in the glow-discharge apparatus, when V_r/V_f increases to a second level or a higher level within a preset time T_0 after the supply of power to the glow-discharge apparatus is stopped.